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**RESEARCH ARTICLE**

**EFFECTIVENESS OF NESTING ON POSTURE AND MOTOR PERFORMANCE AMONG HIGH RISK  
 NEWBORN.**

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**Manuscript Info**

**Manuscript History**

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**Abstract**

**Background and objectives:** Lixisenatide, a selective short-acting glucagon-like peptide 1-receptor agonist (GLP-1RAs), approved in many countries worldwide for use with oral glucose-lowering agents with or without basal insulin for the treatment of adults with uncontrolled type 2 diabetes mellitus (T2DM) as an adjunct to diet and exercise. The aim of this study was to assess the effectiveness of basal insulin treatment regimen intensification with Lixisenatide compared with another injectable drug in patients with T2DM. We also aimed to identify the respective predictive factors for glycemic control.

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**Introduction:-**

High risk newborn is defined as any neonate when is in danger of serious illness or death as a result of prenatal, perinatal or neonatal conditions, regardless of birth weight or gestational age. High risk newborn is most often classified according to birth weight (LBW, VLBW, ELBW) and gestational age (SGA, IUGR, preterm < 37wks) and pathophysiologic problem.

The preterm or sick babies requires support to facilitate and maintain postures that enhances motor control and physiological functioning and reduce stress. Nesting, as a component of developmental care, improves neonates curved limb position and reduction of sudden movements as well as immobility of the arms and legs. Good positioning practices promote neuromotor development and can have a positive effect on both short and long-term outcomes for babies.

**Statement Of The Problem:-**

A Study to Assess the Effectiveness of Nesting on Posture and Motor Performance among High Risk Newborn in Vimal Jyothi Hospital at Coimbatore.

**Objectives:-**

1. To assess the posture and motor performance of high risk newborn in experimental and control group.
2. To provide nesting among high risk newborn in experimental group.
3. To reassess the effectiveness of nesting on posture and motor performance of high risk newborn in both experimental and control group.
4. To compare the effectiveness of nesting on posture and motor performance of high risk newborn in both experimental and control group.
5. To associate the effectiveness of nesting on posture and motor performance of high risk newborn with their selected demographic variables.

### Materials And Methods:-

A quantitative approach and quasi experimental pre-testpost-test with control group was adopted to assess the effectiveness of nesting on posture and motor performance among high risk new-born in Vimal Jyothi hospital at Coimbatore. The samples were selected by convenience sampling technique. The total size of sample was 60, in that 30 samples were allotted for experimental group and 30 were control group. Newborn who satisfied the inclusion criteria were selected for the study. One sample for experimental group and the other sample for control group, likewise the sample were assigned to both groups till the sample size reached. Before Nesting the posture of newborn was assessed by using Infant Position Assessment Tool (IPAT) and motor performance was assessed by using Modified Ferrari Tool, it took 10 minutes. Then the Nesting was provided for one day for each newborn in experimental group and no intervention, only routine care was given for control group. The next day, posture and motor performance of newborn was assessed for both experimental and control group, to assess the effectiveness of nesting by using same IPAT and Modified Ferrari Tool.

### Results:-

**Table 1:-**Comparison of Posture Value in Experimental and Control Group Before Nesting by Using IPAT Tool Significant at 0.05 level

Nesting	Mean	Meandifference	SD	't' value
Experimental group	6.8	0.1	1.18	0.32
Control group	6.7		1.16	

**Table 1** shows that the table value of  $t = 2.045$  at 0.05, calculated value of  $t = 0.32$  at  $P = 0.05$ , which is lesser than the expected table value. This shows that there is no significant effect on maintaining posture among high risk new born.

**Table 2:-**Comparison of Posture Value Among Experimental and Control Group After Nesting by Using IPAT tool

Nesting	mean	Mean difference	SD	't' value
Experimental group	11.3	4	0.94	15.1
Control group	7.3		1.06	

Significant at 0.05 level

**Table 2** shows that the table value of  $t = 2.045$  at 0.05, calculated value of  $t = 15.1$  at  $P = 0.05$ , which is greater than the expected table value. This shows that the nesting has significant effect on maintaining posture among high risk new-born.

**Table 3:-**Comparison of Motor Performance Value in Experimental and Control Group Before Nesting by Using

Nesting	mean	Mean difference	SD	't' value
Experimental group	7.3	0.2	1.4	0.61
Control group	7.1		1.02	

Modified Ferrari tool  
Significant at 0.05 level

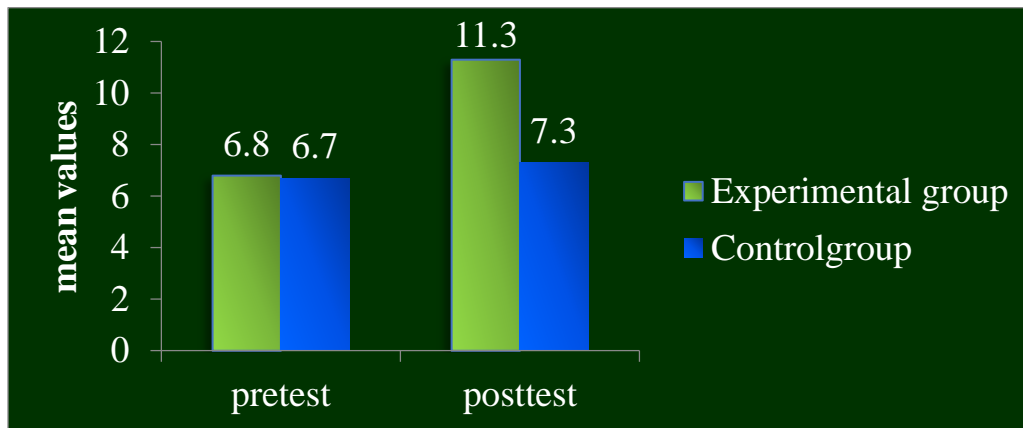
**Table 3** shows that the table value of  $t = 2.045$  at 0.05, calculated value of  $t = 0.61$  at  $P = 0.05$ , which is lesser than the expected table value. This shows that there is no significant effect on maintaining motor performance among high risk new born.

**Table 4:** Comparison of Motor Performance Value Among Experimental and Control Group After Nesting by Using Modified Ferrari Tool

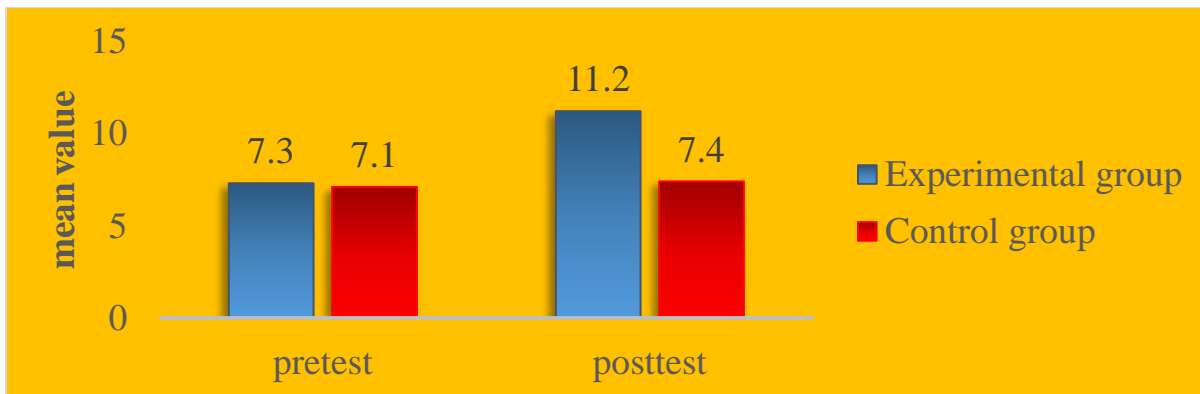
Nesting	mean	Mean difference	SD	't' value
Experimental group	11.2	3.8	1.09	13.2
Control group	7.4		1.10	

Significant at 0.05 level

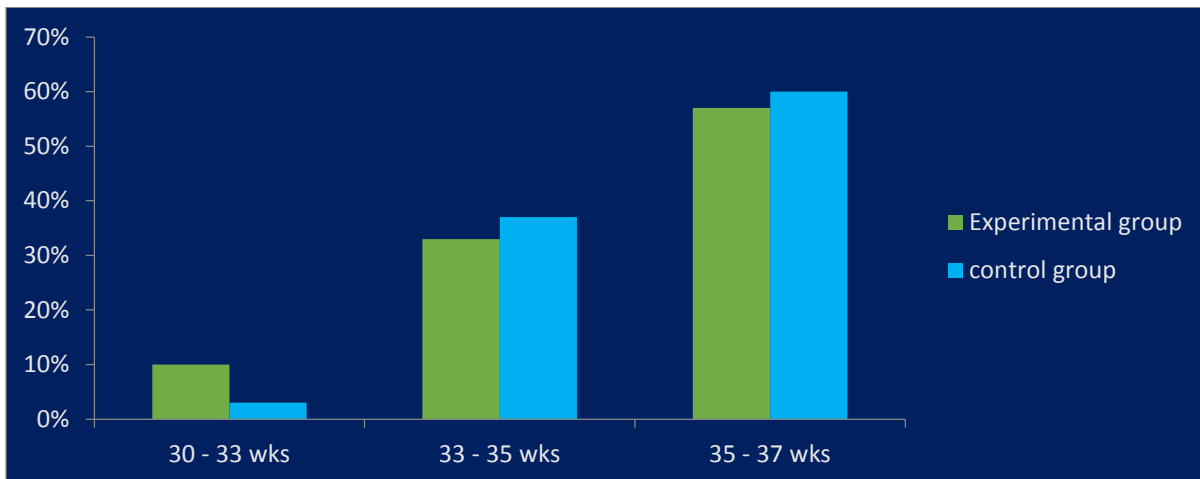
**Table 4** shows that the table value of  $t = 2.045$  at  $0.05$ , calculated value of  $t = 13.2$  at  $P = 0.05$ , which is greater than the expected table value. This shows that the nesting has significant effect on maintaining motor performance among high risk new born.



**Fig 1:-**Comparison of pretest and posttest values for experimental and control group by using IPAT



**Fig 2:-**Comparison of pretest and post test values for experimental and control group by using Ferrari tool



**Fig 3:-**Distribution of demographic variables of gestational age of the baby

**Discussion:-**

The First Objective of the Study was to Assess the Posture and Motor Performance of High Risk Newborn in Experimental and control Group.

Infant Position and Assessment Tool (IPAT) was used to assess the position of the high-risk newborn and Modified Ferrari Tool was used to assess the motor performance of high risk newborn. The mean pretest posture value among experimental group and control group was 6.8 and 6.7. The mean pretest motor performance value among experimental and control group was 7.3 and 7.1. This indicates, that there is no significant effect on maintaining posture among high risk new born in the experimental and control group before providing nesting.

**The Second Objective of the Study was to Provide Nesting among High Risk Newborn in Experimental Group.**

Nesting was made with 4 baby sheets. Roll the sheets way so that they are tubes. These are than placed round the baby. Nesting was provided for one day. And the next day reassessed the posture and motor performance by using IPAT and Modified Ferrari Tool.

**The Third Objective of the Study to Reassess the Effectiveness of Nesting on Posture and Motor Performance of High Risk Newborn in both Experimental and Control Group.**

The IPAT and Modified Ferrari Tool was used to reassess the posture and motor performance of high risk newborns. The mean posttest posture value among experimental and control group was 11.3 and 7.3. The mean posttest motor performance value among control group was 11.2 and 7.4. This reveals that there was a significant difference exist between posttest values of experimental and control group.

**The Fourth Objective of the Study was to Compare the Effectiveness of Nesting on Posture and Motor Performance of High Risk Newborn in both Experimental and Control Group.**

The findings after analysis reveals that the pretest and posttest 't' value of posture among experimental and control group is 0.32 and 15.1. The pretest and posttest 't' value of motor performance among experimental and control group is 0.61 and 13.2. This reveals that there was a significant difference exists between the pretest and posttest value of posture and motor performance among experimental and control group. It showed that the Nesting is effective in maintaining posture and motor performance in experimental group.

**Recommendations:-**

1. Similar studies can be conducted to find the posture and motor performance among newborn babies.
2. An experimental study can be undertaken with one group pretest and posttest for effective comparison.
3. A similar study can be conducted with selected nursing interventions for maintaining good posture and motor performance among newborn babies.
4. A similar study can be conducted as comparative study in and out of nesting in posture and motor performance among high risk newborn

**Conclusion:-**

The main focus of the study was to assess the effectiveness of nesting on posture and motor performance among high risk newborn in Vimal Jyothi Hospital at Coimbatore. The mean posttest score is higher than the mean pretest score. The findings show that the Nesting is effective in maintaining posture and motor performance among high risk newborn. So, the alternative hypothesis was accepted.